

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

## **IMAGES ARE BEST AVAILABLE COPY.**

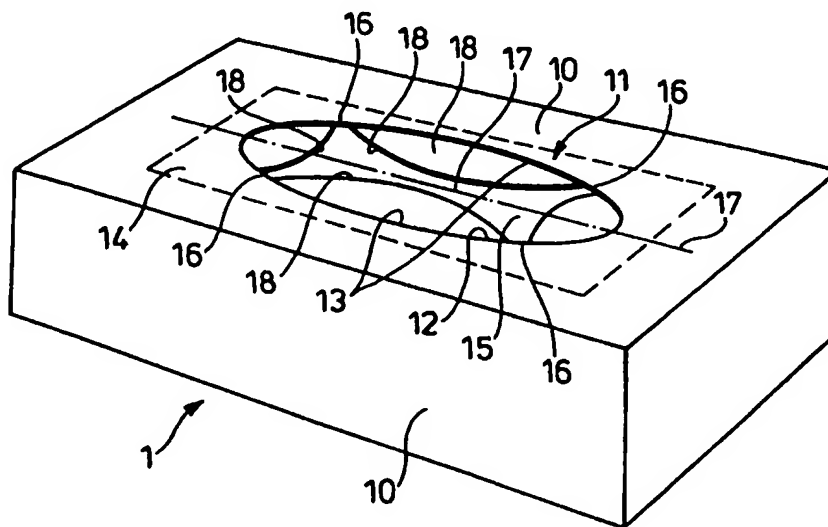
As rescanning documents *will not* correct images,  
Please do not report the images to the  
Image Problem Mailbox.



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>6</sup> : <b>B65D 83/08</b>		A1	(11) International Publication Number: <b>WO 99/55599</b>
			(43) International Publication Date: 4 November 1999 (04.11.99)
(21) International Application Number: PCT/IB99/00737 (22) International Filing Date: 23 April 1999 (23.04.99) (30) Priority Data: 98870093.6                      28 April 1998 (28.04.98)                      EP (71) Applicant (for all designated States except US): THE PROCTER & GAMBLE COMPANY [US/US]; One Procter & Gamble Plaza, Cincinnati, OH 45202 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): LENZ, Martina [DE/DE]; Steinkopfweg 37, D-65931 Frankfurt am Main (DE). MENIF, Rached [FR/DE]; Martin-Niemoeller-Weg 4, D-61267 Neu-Anspach (DE). (74) Agents: REED, David, T. et al.; The Procter & Gamble Company, 5299 Spring Grove Avenue, Cincinnati, OH 45217-1087 (US).		(81) Designated States: AE, AL, AM, AT, AT (Utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), EE, EE (Utility model), ES, FI, FI (Utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  Published With international search report.	

(54) Title: A TISSUE BOX



## (57) Abstract

The present invention is directed to a box (10) for containing tissues, comprising at least one opening (11) located on at least one side of the box, under which a dispensing insert (14) is positioned so that it covers at least partially said opening of the box, said dispensing insert further comprising a cut-out portion (15) or a dispensing slot with at least two portions (16) that contact the border of the box opening, said box being characterized in that the dispensing insert is made out of material with high resilience, so that after being bent it is capable of coming back to its initial shape on its own, without losing its elastic properties.

**FOR THE PURPOSES OF INFORMATION ONLY**

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece			TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	UG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NE	Niger	VN	Viet Nam
CG	Congo	KE	Kenya	NL	Netherlands	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NO	Norway	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	NZ	New Zealand		
CM	Cameroon			PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ	Kazakhstan	RO	Romania		
CZ	Czech Republic	LC	Saint Lucia	RU	Russian Federation		
DE	Germany	LI	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		

## A TISSUE BOX

### Field of the invention

The present invention relates to a box, for containing tissues, that comprises a dispensing insert.

### Background of the invention

The present invention applies to a box for tissues; such containers typically comprise, for example, a body of the box constructed so that tissues can be picked out one by one through an opening located on one side of the box body, and a dispensing insert that covers the box opening. The insert further comprises a dispensing slit or cut-out portion that holds the pop-up tissues.

Such pop-up tissues are typically inter-folded to form the stack of tissues, the insert must help dispensing them one by one in such a way that when one tissue is removed from the box, the following one is partially pulled out, and is held in a substantially up-right position by the dispensing insert, so that it is comfortable for the user to grab and pull it during the next use. This requires appropriate balance between the shape and material that are used for the insert.

Some problems typically occur when removing pop-up tissues from a box, such as chaining, and fall-back, for example. This is typically due to friction of tissues onto the insert, or between them, and/or due to an inappropriate shape for the insert opening. Chaining is defined as the fact that when trying one tissue from the box, several tissues are pulled out all-together. Tissues chaining leads to dispensing more than one tissue at a time, which is clearly not the purpose of the pop-up system, and is clearly undesirable to the consumer. Fall-back of tissues is defined as the fact that when removing a first pop-up tissue from the

box, the next one completely stays in the box, which is clearly not the purpose of a pop-up system.

The following references are directed to boxes tissues including dispensing insert: *United States Patent n° 5.316.177, Kimberley-Clark Co. (KC), May.31,1994*: discloses a pop-up facial tissue dispenser carton box which comprises a paper dispensing window. The dispensing window is provided with an elongated opening having two or more slits emanating from its two ends so that a means for holding the dispensed tissue is provided. *German Utility model, by VPS, G9108036 of 22 August 1991*: discloses a carton tissue box having an opening located in one of its sides. A paper insert at least partially covers the box opening and comprises an opening as well. The opening in the dispensing insert is such that it reaches the border line of the box opening in at least two points.

Dispensing boxes for tissues as described in the preceding documents have a number of disadvantages. Firstly, while the paper that is used can be coated with a low friction material, it is still noisy. Furthermore, such an insert made out of coated paper, leads to a substantial percentage of tissue fall-back, especially after several tissues have been removed from the box. This generally occurs because the insert is deformed, bent, or even torn up. Secondly, the shapes that are used combined to the paper material also lead to a substantial percentage of tissues fall-backs and chainings.

It is therefore one main object of the present invention to provide the user with a box for containing and dispensing tissues, particularly cosmetic tissues, that comprises an insert that avoids tissue fall-back and chaining.

#### Summary of the invention

The present invention is directed to a box for containing tissues, comprising at least one opening located on at least one side of the box, under which a dispensing insert is positioned so that it covers at least partially said opening of the box, said dispensing insert further comprising a cut-out portion or a dispensing slot with at least two portions that contact the border of the box opening, said box being characterized in that the dispensing insert is made out of material with high resilience, so that after being bent over a long period of time, it is capable of coming back to its initial shape on its own, without losing its elastic properties.

#### Brief description of the drawings

The invention will now be explained in detail with reference to the accompanying drawings, in which:

- Figure 1 is a perspective view of the box showing the insert with at least two portions that contact the border of the box opening.
- Figure 2 is a top view showing one embodiment of the invention where the insert opening extends from points to points of the border of the box opening, so as to delimit elastic dispensing tongues.

#### Detailed description of the invention

A box (1) is provided, as shown in figure 1, which can have any suitable shape, but is preferably a rectangle parallelepiped. It comprises a box body (10) with bottom and top walls facing each other, and front and back walls facing each other, and left and right walls facing each other. The box is made out of any suitable material such as plastic, or flat cardboard for example. The packaging materials are to be used either alone or in combination. Preferably, the box is entirely made out of cardboard material. The box is preferably to contain tissues,

more preferably multi-layer tissues. The tissues can be wetted or dry, but are preferably dry tissues.

At least one of the sides of the box body (10), preferably at least the top side, comprises a box opening (11). Optionally but preferably, the box opening is created by the removal of a panel, said panel being created by a precut line (13) in the wall of the box. At first use, this panel is removed and the box opening (11) is created in the box body (10). This box opening (11) comprises a border (12) that corresponds to the precut line (13), once the removable panel has been removed after the first use. Said box opening (11) can have any suitable shape but is preferably ellipsoid. In a preferred embodiment of the present invention, the removable panel comprises a means, for example a notch, that allows the user to insert (14) her/his finger to easily remove the panel before the first use, by tearing it, along the precut line (13), from the rest of the box.

Furthermore, as shown in figure 1, in the preferred embodiment of the present invention, in which the box (1) has the shape of a rectangle parallelepiped, and the box opening (11) has the shape of an ellipse, the longitudinal axis of said box opening (11) is preferably parallel to the longitudinal axis of the box. However, it can be disposed in another way, for example in diagonal or even perpendicular to said longitudinal axis of the box.

A dispensing insert (14) is attached under said box opening (11), that covers it at least partially. Said dispensing insert (14) is preferably positioned in a plane, but can also be positioned such as to be curved in at least one direction, for example if the side to which it is attached is not plane, but curved. Said dispensing insert (14) is made out of a material with high resilience, such that even after being bent over a long period of time, it does not stay bent and comes back into its initial position, without losing its elastic properties. The material must also be chosen so that after several uses, it does not tear up. This ensures that the insert (14) will keep the same dispensing properties over a long period

of time, and will prevent tissue fall-back and chaining. Preferably, the material that is used is a film of a thermoplastic material, such as for example polyethylene or polypropylene, and more preferably polyethylene. This has been tested as a noiseless material with excellent elasticity for comfort of use, and excellent memory properties, thus ensuring stability of the dispensing properties over a long period of time, even with intensive use.

The dispensing insert (14) further comprises at least one portion that is cut, so that when the insert (14) is fixed onto the box opening (11), tissues can be removed through said cut portion. The cut portion can either be a single dispensing slot, or a larger, cut-out portion (15), as shown in figures 1 and 2. The slot or the cut-out portion (15) can be manufactured by the means of a punch or by using laser cutting for example. It is preferably symmetrical and centered on the insert (14), and parallel to the longitudinal axis of the box opening (11).

In one embodiment of the present invention, at least two points of the dispensing slot or cut-out contact the border (12) of the box opening (11). Preferably, the insert (14) comprises a cut-out portion (15) with four points that contact the border (12) of the box opening (11), as shown in figure 1, so that four tongues are created. In the embodiment of the present invention as shown in figure 1, the tongues are of unequal length, but are disposed in a symmetrical way so that two long tongues face each other, and two small ones face each other. This particular shape has proved high efficiency in avoiding tissue fall-back and chaining during dispensing.

However, other shapes can be used such as the embodiment shown in figure 2. The insert (14) cut-out portion (15) comprises multiple points, preferably more than six points contacting the border (12) of the box opening (11) from one point to another. Such a configuration creates dispensing tongues with reduced length from a contacting point to another, and thus, having high elasticity.



The slot or cut-out portion (15) of the insert (14) is designed such as to allow removal of the tissues one by one from a stack of tissues contained inside the box. In the most preferred embodiment of the invention, the tissues are zigzag-folded so as to provide a so-called pop-up way of dispensing. Such a system is well known by those skilled in the art, and allows removal of articles, usually tissues, one by one from a container, in such a way that when a first tissue is removed from the box, the following one is partially pulled out of the box. The purpose of such a system is that, after removal of a tissue, the following one stands in an up-right position, ready to be dispensed by the user. Furthermore, in one preferred embodiment of the present invention, the leading edge of the first tissue to be removed, is bent along a diagonal, relatively to the longitudinal axis of the insert (14) dispensing slot or cut-out portion (15), the leading edge being defined as the edge of the tissue that the user takes when removing the tissue from the box. This allows the consumer to pick up the first tissue from the box in a more convenient way.

The combination of the shape of insert (14) opening with a material with high elasticity and memory, proved surprisingly efficient in avoiding tissue fall-back and chaining, as well as in keeping the leading edge of a tissue in up-right position, even over a long and intensive period of use.

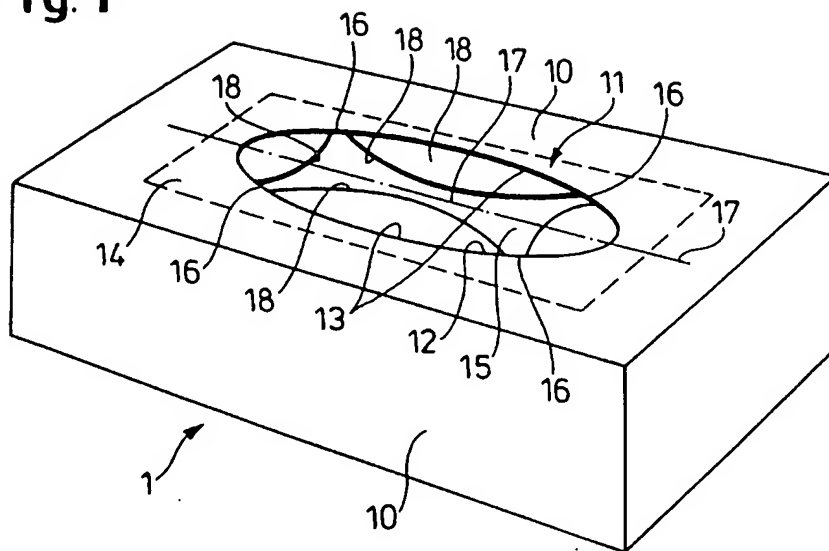
Claims

1. A box (1) for containing tissues, comprising a box body (10), further comprising at least one box opening (11) located on at least one side of the box body (10), under which a dispensing insert (14) is positioned so that it covers at least partially said box opening (11), said dispensing insert (14) further comprising a cut-out portion (15) or a dispensing slot (15) with at least two portions (16) that contact the border (12) of the box opening (11), said box (1) being characterized in that the dispensing insert (14) is made out of material with high resilience, so that after being bent, it is capable of coming back to its initial shape on its own, without losing its elastic properties.
2. A box (1) according to claim 1, wherein the insert (14) is made out of a thermoplastic material.
3. A box (1) according to claim 2, wherein the insert (14) is made out of a polyethylene film.
4. A box (1) according to claims 1 to 3, wherein the box body (10) is entirely made out of a paper material
5. A box (1) according to claim 4, wherein the box body (10) is entirely made out of flat cardboard.
6. A box (1) according to any of the preceding claims, wherein the dispensing cut-out portion or slot (15) of the dispensing insert (14) extends from points (16) to other points (16) of the border (12) of the box opening (11), so as to delimit elastic dispensing tongues (18).

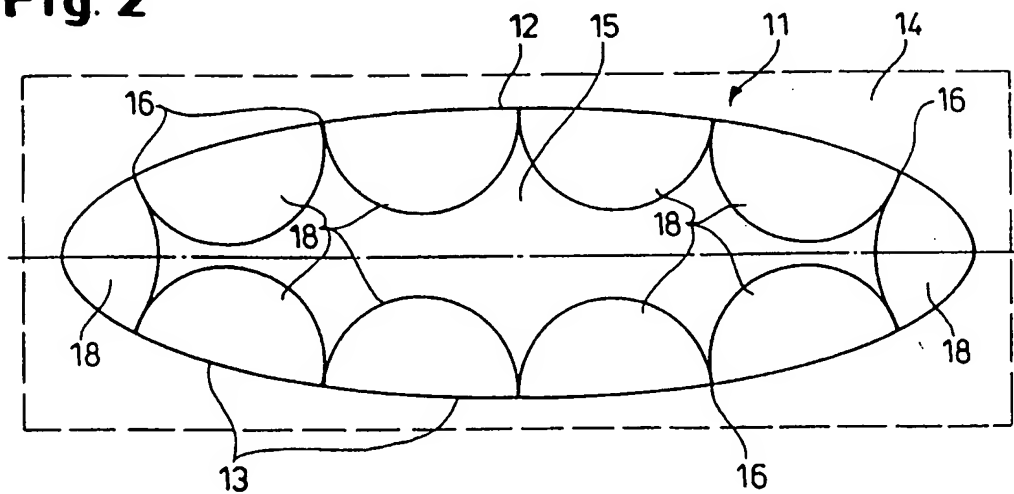
7. A box (1) according to any of the preceding claims, wherein the leading edge of the first tissue is folded along a diagonal, such as to facilitate the removal of said first tissue from the box.

1/1

**Fig. 1**



**Fig. 2**



# INTERNATIONAL SEARCH REPORT

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC 6 B65D83/08		Intern al Application No <b>PCT/IB 99/00737</b>
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) IPC 6 B65D		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 91 08 036 U (VP-SCHICKEDANZ) 22 August 1991 cited in the application	1,4-6
Y	see the whole document ----	2,3,7
Y	EP 0 644 130 A (KIMBERLEY-CLARK) 22 March 1995	2,3
A	see the whole document ----	1,4-6
Y	US 2 257 340 A (JACOBSEN) 30 September 1941 see the whole document -----	7
<div style="display: flex; justify-content: space-between;"> <span><input type="checkbox"/> Further documents are listed in the continuation of box C.</span> <span><input checked="" type="checkbox"/> Patent family members are listed in annex.</span> </div>		
* Special categories of cited documents :		
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>*A* document defining the general state of the art which is not considered to be of particular relevance</p> <p>*E* earlier document but published on or after the international filing date</p> <p>*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>*O* document referring to an oral disclosure, use, exhibition or other means</p> <p>*P* document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="width: 45%;"> <p>*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>*&amp;* document member of the same patent family</p> </div> </div>		
Date of the actual completion of the international search  <div style="text-align: center; font-weight: bold;">9 June 1999</div>		Date of mailing of the international search report  <div style="text-align: center; font-weight: bold;">16/06/1999</div>
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer  <div style="text-align: center; font-weight: bold;">Wennborg, J</div>

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/18 99/00737

Patent document cited in search report	Publication date	Patent family members	Publication date
DE 9108036 U	22-08-1991	NONE	
EP 644130 A	22-03-1995	US 5415320 A CA 2116480 A DE 9422185 U DE 69410371 D DE 69410371 T ES 2119981 T FR 2710251 A GB 2281903 A,B	16-05-1995 21-03-1995 17-09-1998 25-06-1998 03-12-1998 16-10-1998 31-03-1995 22-03-1995
US 2257340 A	30-09-1941	NONE	